

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION**

MOBILITY WORKX, LLC,	§	
	§	
v.	§	CIVIL ACTION NO. 4:17-CV-872
	§	(Judge Mazzant)
CELLCO PARTNERSHIP d/b/a VERIZON	§	
WIRELESS, et al.	§	

CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER

Before the Court are Plaintiff Mobility Workx, LLC’s (“Plaintiff’s” or “Mobility’s”) Opening Claim Construction Brief (Dkt. #48), Defendant Cellco Partnership d/b/a Verizon Wireless’s (“Defendant’s” or “Verizon’s”) Responsive Claim Construction Brief (Dkt. #62), and Plaintiff’s Reply Claim Construction Brief (Dkt. #64). Also before the Court are the parties’ September 19, 2018 Joint Claim Construction and Prehearing Statement (Dkt. #42) and the parties’ February 25, 2019 Joint Claim Construction Chart (Dkt. #68, Ex. A). The Court held a claim construction hearing on March 7, 2019, to determine the proper construction of the disputed claim terms in United States Patents No. 7,231,330 (“the ’330 Patent”) and 8,213,417 (“the ’417 Patent”) (collectively, “the patents-in-suit”).

The Court issues this Claim Construction Memorandum Opinion and Order and hereby incorporates-by-reference the claim construction hearing and transcript as well as the demonstrative slides presented by the parties during the hearing. For the following reasons, the Court provides the constructions set forth below.

BACKGROUND

Plaintiff brings suit alleging infringement of United States Patents No. 7,231,330 and 8,213,417.

The '330 Patent, titled “Rapid Mobility Network Emulator Method and System,” issued on June 12, 2007, and bears an earliest priority date of July 31, 2003. Plaintiff submits that the '330 Patent relates to “a system and method for emulating mobile network communications.” (Dkt. #48 at p. 3). The Abstract of the '330 Patent states:

A system for emulating mobile network communications can include one or more wireless nodes configured to variably adjust signal reception sensitivity and signal transmission strength; at least one mobile node configured to wirelessly communicate with selected ones of the wireless nodes; and a network emulator communicatively linked to each wireless node. The network emulator can replicate attributes of a wired communications network. The system also can include a controller communicatively linked with the wireless nodes and configured to control signal reception sensitivity and signal transmission strength of each said wireless node, as well as a home agent configured to interact with at least one mobile node via selected ones of the wireless nodes.

The '417 Patent, titled “System, Apparatus, and Methods for Proactive Allocation of Wireless Communication Resources,” issued on July 3, 2012, and bears an earliest priority date of July 31, 2003. Plaintiff submits that “the '417 Patent teaches, among other things, a system for proactive allocation of resources in a wireless communications network.” (Dkt. #48 at p. 2). The Abstract of the '417 Patent states:

A system for communication between a mobile node and a communications network is provided for use with a communications network having one or more communications network nodes that define a foreign agents [*sic*] and that communicate with the mobile node in a predefined region. The system includes a ghost-foreign agent that advertises a foreign agent so that the mobile node is aware of the foreign agent when the mobile node is located outside the predefined region. The system further includes a ghost-mobile node that signals the foreign agent in response to the foreign agent advertising and based upon a predicted future state of the mobile node.

The Court construed terms in the '417 Patent in *Mobility Workx, LLC v. T-Mobile US, Inc., et al.*, No. 4:17-CV-567 (E.D. Tex. July 31, 2018) (“*T-Mobile*”).

Shortly before the start of the March 7, 2019 hearing, the Court provided the parties with preliminary constructions with the aim of focusing the parties’ arguments and facilitating

discussion. Those preliminary constructions are noted below within the discussion for each term.

LEGAL STANDARDS

Claim construction is a matter of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995). The purpose of claim construction is to resolve the meanings and technical scope of claim terms. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). When the parties dispute the scope of a claim term, “it is the court’s duty to resolve it.” *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008).

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent’s intrinsic evidence to define the patented invention’s scope. *Id.* at 1313–14; *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification, and the prosecution history. *Phillips*, 415 F.3d at 1312–13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

Claim language guides the Court’s construction of claim terms. *Phillips*, 415 F.3d at 1314. “[T]he context in which a term is used in the asserted claim can be highly instructive.” *Id.* Other claims, asserted and unasserted, can provide additional instruction because “terms are

normally used consistently throughout the patent.” *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 979). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning than it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex*, 299 F.3d at 1325. For example, “[a] claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely, if ever, correct.’” *Globetrotter Software, Inc. v. Elan Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics*, 90 F.3d at 1583). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Constant*

v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 1571 (Fed. Cir. 1988); *accord Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of the patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”). The well-established doctrine of prosecution disclaimer “preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). “Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover.” *Spectrum Int’l v. Sterilite Corp.*, 164 F.3d 1372, 1378–79 (Fed. Cir. 1988) (quotation omitted). “As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.” *Omega Eng’g*, 334 F.3d at 1324. However, the prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002). Statements will constitute disclaimer of scope only if they are “clear and unmistakable statements of disavowal.” *See Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1358 (Fed. Cir. 2003). An “ambiguous disavowal” will not suffice. *Schindler Elevator Corp. v. Otis Elevator Co.*, 593 F.3d 1275, 1285 (Fed. Cir. 2010) (citation omitted).

Although “less significant than the intrinsic record in determining the legally operative meaning of claim language,” the Court may rely on extrinsic evidence to “shed useful light on the relevant art.” *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and

treatises may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful.” *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

ANALYSIS

Agreed Claim Terms

The parties submitted the following agreements in their September 19, 2018 Joint Claim Construction and Prehearing Statement (Dkt. #42) and their February 25, 2019 Joint Claim Construction Chart (Dkt. #68, Ex. A), which the Court hereby adopts as agreed-upon:

<u>Term</u>	<u>Agreed Construction</u>
“the ghost-mobile node” (’417 Patent, Claim 1)	“a node, or a virtual node, that can operate on behalf of the mobile node and that is capable of registering with a foreign agent and allocating resources for the mobile node before the mobile node arrives in the physical area covered by the foreign agent”
“the ghost-foreign agent” (’417 Patent, Claim 1)	“a virtual node corresponding to a foreign agent that can make a mobile node aware of the corresponding foreign agent’s presence in a communication network proximate to the predicted future location of the mobile node”
“a ghost-mobile node that creates replica IP messages on behalf of a mobile node” (’417 Patent, Claim 1)	“a ghost-mobile node that copies IP messages on behalf of a mobile node”

“wireless” (’330 Patent, Claims 1, 3, 4)	“without wires or cables, and only through air or vacuum”
“mobile node configured to wirelessly communicate” (’330 Patent, Claim 1)	“a device that sends and receives signals wirelessly”
“wireless network nodes” (’330 Patent, Claim 1)	“an element of a network that sends and receives signals wirelessly”
“a packet-based wired communications network” (’330 Patent, Claim 1)	“a communications network in which packets of data are transmitted through wires or cables”
“fixedly-located” (’330 Patent, Claim 1)	“set at a particular location”

Disputed Claim Terms

A. “foreign agent”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“a network node on a network that has a different network prefix and that requires a tunnel to assist the mobile node in receiving communications” ¹	“a network node on a visited network that assists the mobile node in receiving communications”

(Dkt. #42, Ex. B at p. 1; Dkt. #48 at p. 4; Dkt. #62 at p. 5; Dkt. #64 at p. 7; Dkt. #68, Ex. A at p. 1). The parties submit that this term appears in Claims 1, 4, and 7 of the ’417 Patent. (Dkt. #42, Ex. A at p. 1; *id.*, Ex. B at p. 1; Dkt. #68, Ex. A at p. 3).

¹ Plaintiff previously proposed: “a network node on a network having a different network prefix requiring a tunnel, that assists the mobile node in receiving communications.” (Dkt. #42, Ex. A at p. 1).

Shortly before the start of the March 7, 2019 hearing, the Court provided the parties with the following preliminary construction: “a network node on a visited network that assists the mobile node in receiving communications.”

1. The Parties’ Positions

Plaintiff submits that whereas *T-Mobile* construed this term to mean “a network node on a visited network that assists the mobile node in receiving communications,” the meaning of “visited network” is disputed. (Dkt. #48 at p. 4). Plaintiff argues that its proposal “simply replaces the term ‘visited network’ in the Court’s previous construction with language taken directly from the above-referenced Mobile IPv4 specification.” (*Id.*).

Defendant responds that “Mobility’s proposed modification lacks support in the intrinsic record and should be rejected.” (Dkt. #62 at p. 6). Defendant also submits that “Mobility attempts to disavow Mobile IP while simultaneously importing limitations from it.” (*Id.* at p. 7). Moreover, Defendant argues that the extrinsic evidence cited by Plaintiff does not even support Plaintiff’s proposed construction because “Mobility attempts to define a ‘visited network’ by what it imagines to be the converse of Mobile IPv4’s definition of ‘home network.’” (*Id.*).

Plaintiff replies that “[u]sing the word ‘[v]isited’ causes confusion, as a Vodafone customer could be visiting a Verizon network while a Verizon customer on a Verizon network is just that – on his home network.” (Dkt. #64 at p. 8). Plaintiff likewise argues that “[a]lthough a mobile unit may be a visitor in a network it roams in, more often it would not be visiting when it connects to one of its own network’s elements.” (*Id.* at pp. 8–9).

At the March 7, 2019 hearing, Defendant submitted that the specification contains no disclosure regarding networks of different wireless carriers. Plaintiff responded that clarification is appropriate to ensure that the phrase “visited network” in the *T-Mobile* construction is not

interpreted so as to limit the scope of these claims to roaming on the network of a different wireless carrier.

2. Analysis

Claim 1 of the '417 Patent, for example, recites (emphasis added):

1. A system for communicating between a mobile node and *a communication network*; the network having at least one communications network node that is interconnected using a proxy mobile internet protocol (IP), comprising:

at least one mobile node;

at least one *home agent*;

at least one *foreign agent*;

a ghost-foreign agent that advertises messages to one of the mobile nodes indicating presence of the ghost-foreign agent on behalf of one of the *foreign agents* when the mobile node is located in a geographical area where the foreign agent is not physically present; and

a ghost-mobile node that creates replica IP messages on behalf of a mobile node, the ghost-mobile node handling signaling required to allocate resources and initiate mobility on behalf of the mobile node, the ghost-mobile node triggering signals based on a predicted physical location of such mobile node or distance with relation to the at least one *foreign agent*.

The specification uses the terms “home agent” and “foreign agent” with reference to “Mobile IP”:

What is generally needed for such architectures to function adequately is some way for the mobile node to let other nodes know where the mobile node can be reached while the host is moving or located away from home. In accordance with a typical mobile networking protocol, a mobile node registers with a home agent so that the home agent can remain a contact point for other nodes that wish to exchange messages or otherwise communicate with the mobile node as it moves from one location to another. An example of such a protocol is *Mobile Internet Protocol (Mobile IP)*. Mobile IP allows a mobile node to use two IP addresses, one being a fixed home address and the other being a care-of address. The care-of address changes as the mobile node moves between networks thereby changing its point of attachment to a network. *When the mobile node links to a network other than one in which the home agent resides, the mobile node is said to have linked to a foreign network.* The home network provides the mobile node with an IP address and once the node moves to a foreign network and establishes a point of attachment, the mobile node receives a care-of address assigned by the foreign network.

Mobile IP v. 4 depends on the interaction between a home agent and foreign agents, the foreign agents serving as wireless access points distributed throughout a coverage area of a network or an interconnection of multiple networks. This architecture, however, does have disadvantages. These have led to assorted proposals for enhancing the capabilities of Mobile IP. One such proposal is to use a hierarchy of foreign agents intended to reduce the number of registrations required for the mobile node.

'417 Patent at 1:36–65 (emphasis added).

The meaning of “foreign agent” in Mobile IP is therefore probative. *See Phillips*, 415 F.3d at 1319 (“because extrinsic evidence can help educate the court regarding the field of the invention and can help the court determine what a person of ordinary skill in the art would understand claim terms to mean, it is permissible for the district court in its sound discretion to admit and use such evidence.”); *see also Ancora Techs., Inc. v. Apple, Inc.*, 744 F.3d 732, 737–38 (Fed. Cir. 2014) (“Under our claim-construction law, a clear ordinary meaning is not properly overcome (and a relevant reader would not reasonably think it overcome) by a few passing references that do not amount to a redefinition or disclaimer.”).

Plaintiff has submitted an extrinsic technical document regarding a standard for “Mobile IP.” This document defines “Mobile Node,” “Home Agent,” and “Foreign Agent” as follows:

Mobile Node

A host or router that changes its point of attachment from one network or subnetwork to another. A mobile node may change its location without changing its IP address; it may continue to communicate with other Internet nodes at any location using its (constant) IP address, assuming link-layer connectivity to a point of attachment is available.

Home Agent

A router on a mobile node’s home network which tunnels datagrams for delivery to the mobile node when it is away from home, and maintains current location information for the mobile node.

Foreign Agent

A router on a mobile node's *visited network* which provides routing services to the mobile node while registered. The foreign agent detunnels and delivers datagrams to the mobile node that were tunneled by the mobile node's home agent. For datagrams sent by a mobile node, the foreign agent may serve as a default router for registered mobile nodes.

(Dkt. #48, Ex. 6, RFC 3344, *IP Mobility Support for IPv4 Foreign Agent* at pp. 5–6) (emphasis added).

The parties' respective proposed constructions reflect agreement that a "foreign agent" is a "network node." The above-reproduced extrinsic evidence, which concerns the Mobile IP standard discussed in the specification, demonstrates that a person of ordinary skill in this particular art would understand the term "foreign agent" as a network node on a visited network that assists a mobile node in receiving communications. *See Phillips*, 415 F.3d at 1319.

As to Plaintiff's proposal that a foreign agent "requires a tunnel to assist the mobile node in receiving communications," Plaintiff has cited the following disclosure in the specification:

In order for the network nodes to relay datagrams to the mobile node 250 when the mobile node is in a foreign network, the mobile node must be communicatively linked to a foreign agent 215, 230 corresponding to that particular foreign network. As the mobile node 250 moves from one foreign network to another, a handoff is required from the foreign agent 215 of the foreign network the mobile node is leaving to the foreign agent 230 of the foreign network at which the mobile node is arriving. The handoff typically entails the mobile node 250 signaling the next foreign agent 230, requesting registration. Registration typically precedes an updating of the care-of address and an appropriate reallocation of communication network resources so that communications addressed to the home agent can be properly relayed to the mobile node 250 by "tunneling" messages through a different set of hierarchically arranged network nodes.

As used herein, tunneling refers to the transmission of data intended for use only within a private, such as a corporate, network through a public network wherein the transmission is performed in such a way that the routing nodes in the public network are unaware that the transmission is part of a private network. Tunneling is generally performed by encapsulating the private network data and protocol information within the public network transmission units so that the private

network protocol information appears to the public network as data. Tunneling allows the use of the Internet, which is a public network, to convey data on behalf of a private network. Common examples of tunneling techniques can include, but are not limited to, Point-to-Point Tunneling Protocol (PPTP) and generic routing encapsulation (GRE). Still, any of a variety of different tunneling techniques can be used.

'417 Patent at 5:39–6:2. Plaintiff has not shown, however, how this discussion of tunneling with reference to “private” networks is relevant in the context in which “foreign agent” is used in the claims.

At the March 7, 2019 hearing, Plaintiff presented argument regarding the meaning of “tunneling,” and Plaintiff asserted that tunneling is always necessary as a technical matter. Plaintiff also cited a definition of “tunnel” in the Mobile IP standard. (Dkt. #48, Ex. 6, RFC 3344, *IP Mobility Support for IPv4 Foreign Agent* at p. 9). Although the Mobile IP definition for “foreign agent” (reproduced above) refers to tunneling, Plaintiff presented no evidence that tunneling is always necessary for the claims to be operable, and Plaintiff cited nothing in the specification that defines “foreign agent” in terms of tunneling. The disclosures cited by Plaintiff are unavailing because tunneling is disclosed as a specific feature of particular embodiments rather than as a necessary part of the claimed invention as a whole. *See, e.g.*, '417 Patent at 2:15–19 (“tunnels the packets to foreign agent 125”) & 10:41–51 (“The home agent 205 can initiate a tunnel to the foreign agent 210 and transmit a registration reply.”); *Phillips*, 415 F.3d at 1323.

Finally, the specification does not discuss a “network prefix.” The above-cited extrinsic evidence defines “Foreign Network,” “Home Network,” and “Visited Network” as follows:

Foreign Network

Any network other than the mobile node’s Home Network.

* * *

Home Network

A network, possibly virtual, having a *network prefix* matching that of a mobile node's home address. Note that standard IP routing mechanisms will deliver datagrams destined to a mobile node's Home Address to the mobile node's Home Network.

* * *

Visited Network

A network other than a mobile node's Home Network, to which the mobile node is currently connected.

(Dkt. #48, Ex. 6, RFC 3344, *IP Mobility Support for IPv4 Foreign Agent* at pp. 7–9) (emphasis added).

However, Plaintiff has neither submitted evidence demonstrating that “network prefix” has a readily understood meaning nor shown that this limitation is compelled by any particular evidence. Indeed, Plaintiff has urged the Court *not* to limit the claims to Mobile IP, stating that although “the Mobile IPv4 specification is certainly instructive,” “[t]o be clear, Mobility does not contend or concede that the claims of the ’417 Patent are limited to Mobile IP. They are not.” (Dkt. #48 at p. 5). Also, Plaintiff has presented assertions as to the meaning of “network prefix,” such as that “[e]ach cellphone (e.g. mobile node) has an IP address as does each tower (e.g. eNodeB)” and “[t]he ‘network prefix’ is the first of four components separated by dots (‘.’)” (Dkt. #64 at p. 9 n.2), but Plaintiff has presented no evidence to support these assertions. The Court therefore rejects Plaintiff’s proposal of construing “foreign agent” so as to refer to a “network prefix.”

Based on all of the foregoing, the Court hereby construes “**foreign agent**” to mean “**a network node on a visited network that assists the mobile node in receiving communications.**”

B. “when the mobile node is located in a geographical area where the foreign agent is not physically present”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“when the mobile node is located outside of the region where it can be linked with the foreign agent”	“when the mobile node is located outside of the region covered by the foreign agent”

(Dkt. #42, Ex. A at p. 2; *id.*, Ex. B at p. 2). The parties submit that this term appears in Claim 1 of the ’417 Patent. (Dkt. #42, Ex. A at p. 2; *id.*, Ex. B at p. 2; Dkt. #68, Ex. A at p. 5).

Plaintiff states: “Upon further consideration of Defendant’s proposed construction, which is the Court’s construction from the T-Mobile case, and in an effort to reduce the issues before the Court, Mobility is willing to agree to Defendant’s proposed construction of this term. Accordingly, Mobility withdraws its proposed construction and accepts Defendant’s proposed construction for this term.” (Dkt. #48 at p. 6). Defendant responds that “[t]his term is no longer in dispute, as Mobility accepted Verizon’s proposed construction in its brief.” (Dkt. #62 at p. 9). Plaintiff replies that “[t]his term is no longer in dispute.” (Dkt. #64 at p. 12).

The Court accordingly hereby construes **“when the mobile node is located in a geographical area where the foreign agent is not physically present”** to mean **“when the mobile node is located outside of the region covered by the foreign agent.”**

C. “updating, in a mobile node, a location in a ghost mobile node”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning	Indefinite

(Dkt. #42, Ex. A at p. 3; *id.*, Ex. B at p. 3; Dkt. #48 at p. 6; Dkt. #62 at p. 9; Dkt. #64 at p. 12; Dkt. #68, Ex. A at p. 4). The parties submit that this term appears in Claim 7 of the ’417 Patent. (Dkt. #42, Ex. A at p. 3; *id.*, Ex. B at p. 3; Dkt. #68, Ex. A at p. 4).

Shortly before the start of the March 7, 2019 hearing, the Court provided the parties with the following preliminary construction: “updating the ghost mobile node with a location of the mobile node.”

1. The Parties’ Positions

Plaintiff submits that the Court properly rejected an indefiniteness argument in *T-Mobile* and correctly found that this term has its plain meaning. (Dkt. #48 at pp. 6–7).

Defendant responds that “[i]t is entirely unclear what ‘updating’ this claim term requires and which entity is required to do it.” (Dkt. #62 at p. 9).

Plaintiff replies that “[u]pdating is a commonly used word[] that does not need any translation.” (Dkt. #64 at p. 13). Plaintiff argues that “after one reads the patent, it is apparent that (i) the mobile node (e.g., cell phone) is being updated with its own location as it moves through space, (ii) the mobile node updates its location stored within itself, and updates that location in the ghost mobile node, and (iii) the ghost mobile node is also being updated with the location of the mobile node (cell phone) as it travels.” (*Id.*).

At the March 7, 2019 hearing, Defendant urged that the double usage of the word “in” renders the claim not reasonably clear.² Plaintiff responded that the claim perhaps could have been written better, but Plaintiff maintained that the claim is not indefinite. Plaintiff agreed with the Court’s preliminary construction.

² At the March 7, 2019 hearing, Defendant also argued that the claim in which this term appears was never examined and was mistakenly included in the patent by the United States Patent and Trademark Office despite the claim having been withdrawn by the patentee during prosecution. Defendant has submitted no precedent for considering this argument during claim construction proceedings, whether as part of an indefiniteness analysis or otherwise, so the Court does not address this issue.

2. Analysis

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 134 S. Ct. 2120.

Based on the claim language itself as well as the context provided by disclosures in the specification, the Court in *T-Mobile* rejected an indefiniteness challenge. *See T-Mobile* at pp. 36–39. Here, Defendant presents a similar indefiniteness challenge, and this challenge does not bear upon the meaning of “updating” but rather on whether the disputed term as a whole is sufficiently clear as to what is being updated and how it is being updated.

Claim 7 of the ’417 Patent recites (emphasis added):

7. A method, in a mobile node, for speeding handover, comprising the steps of:
 - updating, in a mobile node, a location in a ghost mobile node;*
 - determining a distance, in the ghost mobile node in communication with the mobile node, to a closest foreign agent with which the mobile node can complete a handover;
 - submitting on behalf of the mobile node, from the ghost mobile node, a registration to the foreign agent to which the mobile node is going to complete the handover; and
 - upon completing the handover, updating a registration in the mobile node.

The specification discloses:

By continuously and/or periodically determining its position via the GSP [*sic*, GPS] unit or other technique, the ghost-mobile node 220 can extrapolate from the current location and predict future locations of the mobile node 250.

'417 Patent at 7:4–7; *see id.* at 8:45–9:5 (“Based upon the predicted future state of the mobile node 250, the ghost-mobile node 220 can determine which foreign agent 210, 215, 230 is likely to serve as the mobile node’s next communicative link.”).

The specification, as well as the surrounding claim language, support interpreting the disputed term as referring to updating the ghost mobile node regarding the location of the mobile node. The Court reaches the same conclusion here as in *T-Mobile* and hereby expressly rejects Defendant’s indefiniteness argument. Defendant’s challenges as to the sufficiency of the above-cited disclosures perhaps may bear upon issues of enablement or written description, but Defendant has failed to carry its burden to show indefiniteness. *See Sonix Tech. Co. v. Publ’n Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017) (“Indefiniteness must be proven by clear and convincing evidence.”); *see also Phillips*, 415 F.3d at 1327 (“we have certainly not endorsed a regime in which validity analysis is a regular component of claim construction). Nonetheless, “some construction of the disputed claim language will assist the jury to understand the claims.” *TQP Dev., LLC v. Merrill Lynch & Co., Inc.*, No. 2:08-CV-471, 2012 WL 1940849, at *2 (E.D. Tex. May 29, 2012) (Bryson, J., sitting by designation).

The Court therefore hereby construes **“updating, in a mobile node, a location in a ghost mobile node”** to mean **“updating the ghost mobile node with a location of the mobile node.”**

D. “configured to variably adjust wireless communication characteristics”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning	“configured such that wireless communication characteristics of the transmitter or receiver are variably adjusted by the wireless network nodes through the controller”

(Dkt. #42, Ex. A at p. 4; *id.*, Ex. B at p. 5; Dkt. #48 at p. 7; Dkt. #62 at p. 11; Dkt. #64 at p. 14; Dkt. #68, Ex. A at p. 6). The parties submit that this term appears in Claim 1 of the '330 Patent. (Dkt. #42, Ex. A at p. 4; *id.*, Ex. B at p. 5; Dkt. #68, Ex. A at p. 7).

Shortly before the start of the March 7, 2019 hearing, the Court provided the parties with the following preliminary construction: “configured such that the controller can cause the wireless network nodes to adjust wireless communication characteristics of the wireless network nodes.”

1. The Parties’ Positions

Plaintiff argues that Defendant’s proposed construction is unnecessary and confusing in light of surrounding claim language. (Dkt. #48 at pp. 7–8). Plaintiff also argues that “the specification makes clear that not all ‘wireless communication characteristics’ are ‘of the transmitter or receiver’ . . .” (*Id.* at p. 9).

Defendant responds that “Verizon’s construction is a much-needed clarification of the claim language, supported by the specification.” (Dkt. #62 at p. 11). Defendant argues that “[t]he claim language demonstrates that the wireless communication characteristics of the transmitter or receiver are variably adjusted *by* the wireless network nodes *through* the controller.” (*Id.*).

Plaintiff replies that “the wireless network node does not interact with the controller in any way” because, for example, “[t]he wireless network node transmits at its regular power level regardless if one adds or subtracts 10 dB of attenuation to a signal strength.” (Dkt. #64 at p. 15).

2. Analysis

At the March 7, 2019 hearing, both sides were amenable to the Court’s preliminary construction. Nonetheless, the parties’ briefing and oral arguments have demonstrated that some

analysis is necessary to resolve certain differences in the parties' interpretations of the term at issue. Turning first to the claim language, Claims 1, 3, and 4 of the '330 Patent recite (emphasis added):

1. A system for emulating mobile network communications comprising:
 - a plurality of fixedly-located wireless network nodes *configured to variably adjust wireless communication characteristics*;
 - at least one mobile node configured to wirelessly communicate with selected ones of said plurality of wireless network nodes;
 - a network emulator communicatively linked to each of said plurality of wireless network nodes, said network emulator configured to emulate attributes of a packet-based wired communications network for simulating network conditions experienced by said at least one mobile node in communicating with other nodes through the wired communications network, the emulated attributes comprising at least one of tunable packet-delay distribution, network congestion, bandwidth limitation, and packet re-ordering and duplication; and
 - a controller communicatively linked to each of said plurality of wireless network nodes, said controller configured to control the wireless communication characteristics of each of said plurality of wireless network nodes to simulate, without changing operating parameters of said at least one mobile node, different wireless communication conditions experienced by said at least one mobile node in actual operation.

* * *

3. The system of claim 1, wherein said wireless *communication characteristics* include a signal reception sensitivity.
4. The system of claim 1, wherein said wireless *communication characteristic* includes at least one of signal transmission strength, signal-to-noise ratio (SNR), and bit error rate (BER).

Reading the disputed term in the context of the claims as a whole, the controller *controls* the wireless communication characteristics of the wireless network nodes by way of the wireless network nodes *themselves* adjusting those characteristics. The specification is consistent with this understanding, disclosing:

The controller can be configured to control signal reception sensitivity and signal transmission strength of each wireless node.

According to another embodiment of the present invention, three wireless nodes can be included. In any case, *each of the wireless nodes can include a wireless access point having an antenna*, for example an omni-directional antenna, *and a variable attenuator*. The wireless nodes also can include a routing device communicatively linking the access point with the network emulator.

The controller can be configured to dynamically adjust the wireless communication characteristics of one or more of the wireless access points by varying an amount of attenuation provided by the attenuators to simulate motion of one or more of the mobile nodes. For example, attenuation provided by at least one of the attenuators can be increased while simultaneously decreasing attenuation provided by another one of the attenuators. The controller can dynamically adjust the amount of attenuation provided by at least two of the attenuators to emulate at least one mobile network characteristic such as speed, acceleration, and/or trajectory of the mobile node.

* * *

Each wireless node 105 also can include an attenuator 145 disposed between each wireless access point 130 and antenna 140. The attenuators 145 can be implemented as a variable or programmable attenuator for use with antennas. Each attenuator 145 can *receive control signals* allowing the amount of attenuation provided by that attenuator 145 to be controlled dynamically from another device. Accordingly, wireless communication characteristics such as the sensitivity of the access point with respect to both signal reception and signal transmission can be modified by adjusting the attenuators 145.

For example, by increasing the amount of attenuation provided by an attenuator 145, the power delivered from a wireless access point 130 to an attached antenna 140 for transmission as well as the power of a signal received by an antenna 140 that is delivered to the wireless access point 130 can be reduced. Decreasing the amount of attenuation allows the wireless access point 130 to deliver increased power to an attached antenna 140 for transmission as well as receive higher power signals from the attached antenna 140.

* * *

The controller 120 is operatively connected to each attenuator 145. Accordingly, *the controller 120 can provide control signals to each attenuator 145 of the wireless nodes 105.*

'330 Patent at 2:49–3:3, 5:6–25 & 5:37–40 (emphasis added); *see id.* at 7:50–55 (“In step 215, the attenuation provided by one or more of the attenuators can be dynamically varied. For example, the controller can decrease the amount of attenuation for one of the wireless nodes

while increasing the amount of attenuation with respect to the other wireless nodes. In this manner, motion of the mobile node can be emulated.”).

The specification thus discloses controlling the effective communication characteristics of the wireless nodes by controlling the attenuators, wherein the attenuators are disclosed as being included as part of the wireless nodes. Also, during prosecution the patentee argued that a prior art reference did not disclose “one or more fixedly-located wireless nodes whose variably adjustable wireless communication characteristics are controlled by the controller so as to effect . . . a simulation.” (Dkt. #62, Ex. E, Jan. 5, 2007 Response to Office Action at p. 12) (p. 13 of 47 of Ex. E). Plaintiff’s argument that “the wireless network node does not interact with the controller in any way” (Dkt. #64 at p. 15) thus contradicts the intrinsic evidence.

Nonetheless, Defendant has not shown adequate support for its proposal that the wireless communication characteristics must be “of the transmitter or receiver.” The transmission-related and reception-related limitations in dependent Claims 3 and 4 (reciting “signal reception sensitivity” and “signal transmission strength, signal-to-noise ratio (SNR), and bit error rate (BER)”), cited by Defendant, do not justify a narrow interpretation of the disputed term in Claim 1 because dependent claims are presumed to be narrower than the claim from which they depend. Moreover, to the extent that an “of the transmitter or receiver” limitation might be inferred from the above-reproduced disclosures in the specification, Defendant has not demonstrated that this is a necessary limitation of the disputed term. *See Phillips*, 415 F.3d at 1323. For example, the specification discloses that “[t]he present invention also can emulate other wireless communication characteristics such as load and congestion by limiting the wireless point response time.” ’330 Patent at 9:55–57. Finally, at the March 7, 2019 hearing, Defendant argued that adjusting wireless communication characteristics of a wireless network

node inherently involves adjusting wireless communication characteristics of a transmitter or receiver, but Defendant has not shown why this is necessarily so.³

The Court therefore hereby construes **“configured to variably adjust wireless communication characteristics”** to mean **“configured such that the controller can cause the wireless network nodes to adjust wireless communication characteristics of the wireless network nodes.”**

E. “communicatively linked”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning	“capable of transmitting and receiving signals via an external wireless interface”

(Dkt. #42, Ex. A at p. 5; *id.*, Ex. B at p. 6; Dkt. #48 at p. 10; Dkt. #62 at p. 14; Dkt. #64 at p. 16; Dkt. #68, Ex. A at p. 7). The parties submit that this term appears in Claim 1 of the ’330 Patent. (Dkt. #42, Ex. A at p. 5; *id.*, Ex. B at p. 6; Dkt. #68, Ex. A at p. 9).

Shortly before the start of the March 7, 2019 hearing, the Court provided the parties with the following preliminary construction: “capable of transmitting and receiving signals via an interface.”

1. The Parties’ Positions

Plaintiff argues that “an analysis [of] this term in the context of its use in the claim reveals the impropriety of Defendant’s proposed construction, which attempts to restrict this term to ‘an external wireless interface.’” (Dkt. #48 at p. 10).

³ To whatever extent Defendant is proposing that *all* wireless communication characteristics must be controlled through the controller, the claim language requires only that some plurality of wireless communication characteristics are controlled. In other words, Defendant has not shown that this claim language should be interpreted as exclusive (so as to preclude the presence of additional wireless communication characteristics).

Defendant responds that “[b]ecause the emulator and the controller are ‘communicatively linked’ to the wireless network nodes, . . . the link between those components and the wireless network nodes must also be wireless.” (Dkt. #62 at p. 15). Defendant also argues that “not only do the claims distinguish being ‘connected’ from being ‘communicatively linked,’ but the specification contrasts an ‘integrated’ transceiver with one that is ‘separate’ and ‘communicatively linked’ to the mobile node, thus confirming that a ‘communicatively linked’ component is *external*.” (*Id.*).

Plaintiff replies that “[t]he Patent covers more than the situation where the emulator transmits and receives signals (communicating) via an external wireless interface. The emulator described in the Patent is also capable of communicating in other ways, such as via a wired interface.” (Dkt. #64 at p. 16).

At the March 7, 2019 hearing, Plaintiff was amenable to the Court’s preliminary construction.

2. Analysis

Plaintiff does not appear to object to Defendant’s proposal of “capable of transmitting and receiving signals,” and Plaintiff appears to agree that communication involves an interface. For example, Plaintiff has cited disclosure that “[t]he controller 120 can include a suitable communications interface for communicating with each attenuator 145” and that “the controller 120 also can be communicatively linked with the emulator 110.” ’330 Patent at 5:46–47 & 6:34–36. The parties dispute: (1) whether the interface must be wireless; and (2) whether the interface must be external.

As to whether the interface must be wireless, the parties have discussed Figure 1 of the ’330 Patent, which is reproduced here:

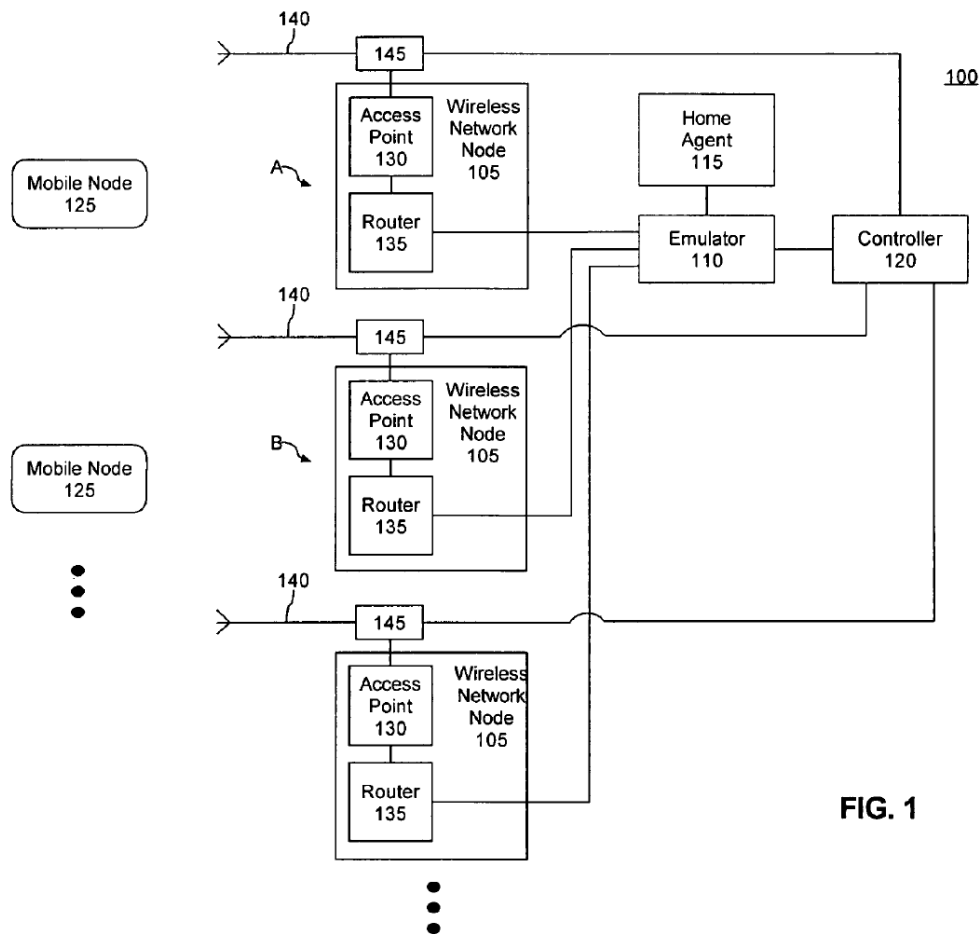


FIG. 1

Plaintiff argues that “the emulator is in the middle and is hard wired to the routers,” but Plaintiff has not shown why the use of lines in Figure 1 necessarily implies wired connections. Merely pointing to the illustration of antennas 140 is insufficient in this regard. Further, even if the lines in Figure 1 were interpreted as illustrating wired connections, “patent coverage is not necessarily limited to inventions that look like the ones in the figures.” *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1333 (Fed. Cir. 2007).⁴

⁴ Also, Plaintiff has interpreted disclosures in the specification regarding routers and packet-based communications as necessarily referring to wired connections (*see* '330 Patent at 5:60–66 & 7:15–19), but Plaintiff has not supported its interpretation with any evidence. (*See* Dkt. #64 at pp. 17–18).

Turning to the claim language, this disputed term appears in Claim 1 of the '330 Patent, which recites (emphasis added):

1. A system for emulating mobile network communications comprising:
 - a plurality of fixedly-located wireless network nodes configured to variably adjust wireless communication characteristics;
 - at least one mobile node configured to wirelessly communicate with selected ones of said plurality of wireless network nodes;
 - a network emulator *communicatively linked* to each of said plurality of wireless network nodes, said network emulator configured to emulate attributes of a packet-based wired communications network for simulating network conditions experienced by said at least one mobile node in communicating with other nodes through the wired communications network, the emulated attributes comprising at least one of tunable packet-delay distribution, network congestion, bandwidth limitation, and packet re-ordering and duplication; and
 - a controller *communicatively linked* to each of said plurality of wireless network nodes, said controller configured to control the wireless communication characteristics of each of said plurality of wireless network nodes to simulate, without changing operating parameters of said at least one mobile node, different wireless communication conditions experienced by said at least one mobile node in actual operation.

This claim explicitly recites that the mobile node is configured to “wirelessly communicate” with wireless network nodes, but no such “wirelessly communicate” requirement is recited as to the “network emulator” and “controller” limitations.⁵ The claim language thus does not compel limiting the term “communicatively linked” to using wireless communication.

Defendant has cited Claim 20 of the '330 Patent, which recites in relevant part (emphasis added):

20. A computer readable storage medium for use in emulating mobile network communications, the storage medium comprising computer instructions for:

⁵ The “network emulator” is recited as emulating a “wired communications network.” This limitation relates to simulating network conditions experienced by said at least one mobile node in communicating with other nodes through the wired communications network. This “wired communications network” limitation does not specify that the network emulator is linked to the wireless network nodes through a wired communications network. This limitation is therefore not probative as to whether the term “communicatively linked” should be limited to a particular communication mechanism.

initiating communications between a home agent and a mobile node via at least one fixedly-located wireless network node *connected* to a controller;. . .

Defendant has not shown, however, that this usage of “connected” necessarily implies that “communicatively linked” has a narrower meaning. *See Bancorp Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1373 (Fed. Cir. 2004) (“it is not unknown for different words to be used to express similar concepts, even though it may be poor drafting practice”); *see also Nystrom v. TREX Co., Inc.*, 424 F.3d 1136, 1143 (Fed. Cir. 2005) (“Different terms or phrases in separate claims may be construed to cover the same subject matter where the written description and prosecution history indicate that such a reading of the terms or phrases is proper.”).

At the March 7, 2019 hearing, Defendant highlighted that the parties have agreed that a “wireless network node” is “an element of a network that sends and receives signals wirelessly.” (Dkt. #68, Ex. A at p. 11). Still, Defendant has failed to show how this wireless networking capability purportedly implies that the communication links with the *network emulator* and the *controller* are necessarily wireless, particularly given that above-reproduced Claim 1 explicitly recites that communication with the *mobile node* is wireless.

Thus, Defendant has failed to show that any of the claim language requires “communicatively linked” to be a wireless link, and no other cited evidence compels such a narrow reading of this term.

As to whether the interface must be external, Defendant argues that the specification sets forth a definition in this regard in the following passage:

The mobile nodes 125 can be implemented as general purpose computing devices, each having a wireless transceiver *such as an integrated transceiver or a separate transceiver communicatively linked to the unit*, for example a wireless network interface card or other peripheral attachment.

'330 Patent at 4:23–28 (emphasis added). In some cases, “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess,” and “[i]n such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316.

Here, the above-reproduced passage does not rise to the level of a definition. *See CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (“the claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and *clearly* set forth a definition of the disputed claim term in either the specification or prosecution history”) (emphasis added). Further, even if this passage did present a definition, Defendant has not shown that the phrase “communicatively linked to the unit” refers to only “a separate transceiver” rather than “an integrated transceiver or a separate transceiver.” That is, Defendant has not shown that this passage refers to “communicatively linked” as being limited to using a “separate” transceiver.

Defendant has also cited the above-reproduced Figure 1, but Defendant has not supported its assertion that “[i]t is clear from Figure 1 that both the Controller 120 and the Emulator 110 are connected externally to the wireless network nodes 105.” (Dkt. #62 at p. 16). That is, Defendant has not shown that the appearance of distinct boxes in the Figure 1 diagram necessarily implies the presence of an external interface. Further, even if Defendant’s interpretation of Figure 1 was accepted, the manner of illustration does not warrant limiting the scope of Claim 1. *See MBO Labs.*, 474 F.3d at 1333. Finally, Defendant has not shown how the mere presence of a communication linkage necessarily implies that the communication interface is external. In sum, Defendant has failed to persuasively support its proposal of requiring an external interface.

The Court therefore hereby construes “**communicatively linked**” to mean “**capable of transmitting and receiving signals via an interface.**”

F. “without changing operating parameters of said at least one mobile node”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning	“without physically moving the said at least one mobile node or changing its transmit power level”

(Dkt. #42, Ex. A at p. 6; *id.*, Ex. B at p. 7; Dkt. #48 at p. 12; Dkt. #62 at p. 17; Dkt. #64 at p. 19; Dkt. #68, Ex. A at p. 9). The parties submit that this term appears in Claim 1 of the ’330 Patent. (Dkt. #42, Ex. A at p. 6; *id.*, Ex. B at p. 7; Dkt. #68, Ex. A at p. 10).

Shortly before the start of the March 7, 2019 hearing, the Court provided the parties with the following preliminary construction: “Plain meaning.”

1. The Parties’ Positions

Plaintiff argues that “an analysis of this term in the context of its use in the claim reveals the primary flaw of Defendant’s proposed construction, which improperly attempts to import a limitation that would restrict movement of (‘without physically moving’) the mobile node.” (Dkt. # 48 at p. 12).

Defendant responds that “Verizon’s construction finds support in the specification, the prosecution history, and the purpose of the alleged invention.” (Dkt. #62 at p. 17).

Plaintiff replies: “Nowhere in the patent itself does it describe the mobile node changing its position or increasing its transmit power level. Defendant is trying to insert terms and characteristics in the patent claim language that simply do not exist.” (Dkt. #64 at p. 19).

2. Analysis

Claim 1 of the ’330 Patent recites (emphasis added):

1. A system for emulating mobile network communications comprising:
 - a plurality of fixedly-located wireless network nodes configured to variably adjust wireless communication characteristics;
 - at least one mobile node configured to wirelessly communicate with selected ones of said plurality of wireless network nodes;
 - a network emulator communicatively linked to each of said plurality of wireless network nodes, said network emulator configured to emulate attributes of a packet-based wired communications network for simulating network conditions experienced by said at least one mobile node in communicating with other nodes through the wired communications network, the emulated attributes comprising at least one of tunable packet-delay distribution, network congestion, bandwidth limitation, and packet re-ordering and duplication; and
 - a controller communicatively linked to each of said plurality of wireless network nodes, said controller configured to control the wireless communication characteristics of each of said plurality of wireless network nodes to simulate, *without changing operating parameters of said at least one mobile node*, different wireless communication conditions experienced by said at least one mobile node in actual operation.

As a threshold matter, Defendant has not shown that the phrase “operating parameters” encompasses physical location. On this basis alone, Defendant has failed to adequately support its proposed construction.

Turning to the specification, Defendant has emphasized disclosure regarding how “[m]otion of the mobile node can be simulated. . . .” ’330 Patent at 2:25–28; *see id.* at 2:59–3:3 (“varying an amount of attenuation provided by the attenuators to simulate motion of one or more of the mobile nodes”), 3:10–21, 5:17–25 & 6:46–67. Although the specification discloses that each mobile node “represents” a moving network node, the specification discloses that the mobile node could be “repositioned at any of a variety of different locations”:

Each mobile node 125 represents a moving network node, communications device, and/or computer system. Each mobile node 125 can be a computing device having a suitable wireless communication interface.

* * *

The mobile node 125 need not be a moveable or roaming component as the system 100 is configured to simulate motion of the mobile node 125 at any of a variety of different speeds, accelerations, or trajectories despite the mobile node

125 being stationary in nature. *If desired, however, the mobile node 125 can be repositioned at any of a variety of different locations.*

Id. at 4:20–23 & 4:37–43 (emphasis added).

Thus, even assuming that the phrase “operating parameters” can be interpreted as encompassing position, this disclosure that the mobile node “need not” move but could be “repositioned,” if desired, weighs against Defendant’s proposal of “without physically moving the said at least one mobile node” as to the present disputed term. *Id.* at 4:37–43. The prosecution history cited by Defendant, which concerns this same disclosure, similarly does not preclude movement of the mobile node. (See Dkt. #62, Ex. E, Response to Office Action at p. 9 (p. 10 of 47 of Ex. E); *see also id.*, Application No. 10/909,588 at ¶ 23 (p. 29 of 47 of Ex. E)).

As to the remainder of Defendant’s proposal, Plaintiff agrees that “transmit power level is an operating parameter of a mobile node and . . . a person of ordinary skill in the art would understand the term ‘operating parameter’ to encompass transmit power level.” (Dkt. #48 at p. 13 n.4) (citation omitted).⁶ Yet, adopting Defendant’s proposal in this regard would imply that “operating parameters” are *limited* to transmit power. No definition or disclaimer has been shown that would warrant imposing such a narrow interpretation on “operating parameters.”

The Court therefore hereby expressly rejects Defendant’s proposed construction. No further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568 (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to

⁶ The prosecution history cited by Defendant is consistent with this understanding. (See Dkt. #62, Ex. E, Jan. 5, 2007 Response to Office Action at p. 11) (p. 12 of 47 of Ex. E) (in distinguishing the “Krishnamurthy” reference (United States Patent No. 6,735,448), stating that in Krishnamurthy “the procedure must be effected by each of the respective mobile nodes changing its own operating parameters, namely its own ‘transmit power level’”) (emphasis omitted); *see also id.* at p. 12 (p. 13 of 47 of Ex. E) (“Krishnamurthy requires a plurality of mobile nodes that exchange signals with one another and that alter and set their own transmit power levels according to Krishnamurthy’s Power Measurement procedure.”).

explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro*, 521 F.3d at 1362 (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”); *Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015).

The Court accordingly hereby construes **“without changing operating parameters of said at least one mobile node”** to have its **plain meaning**.

CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 15th day of March, 2019.

A handwritten signature in black ink, appearing to read 'K. Priest Johnson', written over a horizontal line.

KIMBERLY C. PRIEST JOHNSON
UNITED STATES MAGISTRATE JUDGE